

Product datasheet for **RC227802**

alpha smooth muscle Actin (ACTA2) (NM_001141945) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	alpha smooth muscle Actin (ACTA2) (NM_001141945) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	alpha smooth muscle Actin
Synonyms:	ACTSA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC227802 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTGTGAAGAAGAGGACAGCACTGCCTTGGTGTGTGACAATGGCTCTGGGCTCTGTAAGGCCGGCTTTG
CTGGGGACGATGCTCCCAGGGCTGTTTTCCCATCCATTGTGGGACGTCCCAGACATCAGGGGGTGATGGT
GGGAATGGGACAAAAGACAGCTACGTGGGTGACGAAGCACAGAGCAAAAGAGGAATCCTGACCCTGAAG
TACCCGATAGAATGGCATCATCACCACCTGGGACGACATGGAAAAGATCTGGCACCCTCTTTCTACA
ATGAGCTTCGTGTTGCCCTGAAGAGCATCCCACCCTGCTCACGGAGGCACCCCTGAACCCCAAGGCCAA
CCGGGAGAAAATGACTCAAATTATGTTTGAGACTTTCAATGTCCCAGCCATGTATGTGGCTATCCAGGCG
GTGCTGTCTCTATGCCTCTGGACGCACAACCTGGCATCGTGTGGACTCTGGAGATGGTGTCAACCACA
ATGTCCCATCTATGAGGGCTATGCCTTGCCCCATGCCATCATGCGTCTGGATCTGGCTGGCCGAGATCT
CACTGACTACCTCATGAAGATCCTGACTGAGCGTGGCTATTCTTCGTTACTACTGCTGAGCGTGAGATT
GTCCGGGACATCAAGGAGAACTGTGTTATGTAGCTCTGGACTTTGAAAATGAGATGGCCACTGCCGCAT
CCTCATCCTCCCTTGAGAAGAGTTACGAGTTGCCTGATGGGCAAGTGATCACCATCGGAAATGAACGTTT
CCGCTGCCAGAGACCTGTTCCAGCCATCCTTCATCGGGATGGAGTCTGCTGGCATCCATGAAACCACC
TACAACAGCATCATGAAGTGTGATATTGACATCAGGAAGGACCTCTATGCTAACAATGTCCTATCAGGGG
GCACCACTATGTACCCTGGCATTGCCGACCGAATGCAGAAGGAGATCACGGCCCTAGCACCCAGCACCAT
GAAGATCAAGATCATTGCCCTCCGGAGCGCAAATACTCTGTCTGGATCGGTGGCTCCATCCTGGCCTCT
CTGTCCACCTTCAGCAGATGTGGATCAGCAAACAGGAATACGATGAAGCCGGGCCTTCCATTGTCCACC
GCAATGCTTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



[View online »](#)

Protein Sequence: >RC227802 protein sequence
 Red=Cloning site Green=Tags(s)

MCEEDSTALVCDNGSGLCKAGFAGDDAPRAVFPISVGRPRHQGVVMGMGQKDSYVGDEAQSQRGILTLK
 YPIEHGIITNWDMEKIWHHSFYNELRVAPEEHPTLLTEAPLNPKANREKMTQIMFETFNVPAMYVAIQA
 VLSLYASGRTTGIVLDSGDGVTHNVPIYEGYALPHAIMRLDLAGRDLTDYLMKILTERGYSFVTTAEREI
 VRDIKEKLCYVALDFENEMATAASSSSLEKSYELPDGQVITIGNERFRCPETLFQPSFIGMESAGIHETT
 YNSIMKCDIDIRKDLANNVLSGGTTMYPGIADRMQKEITALAPSTMKIKIIAPPERKYSVWIGGSILAS
 LSTFQQMWISKQEYDEAGPSIVHRKCF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6071_a01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001141945

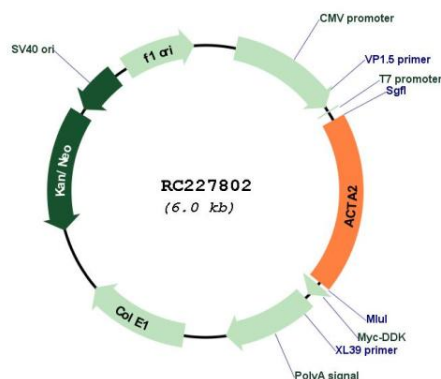
ORF Size: 1131 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

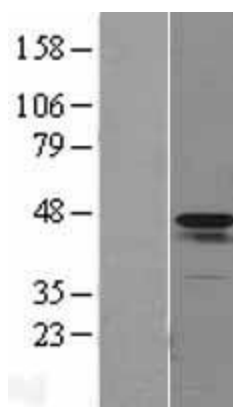
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none"> 1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_001141945.2
RefSeq Size:	1798 bp
RefSeq ORF:	1134 bp
Locus ID:	59
UniProt ID:	P62736
Cytogenetics:	10q23.31
Protein Pathways:	Vascular smooth muscle contraction
MW:	42 kDa
Gene Summary:	This gene encodes one of six different actin proteins. Actins are highly conserved proteins that are involved in cell motility, structure, integrity, and intercellular signaling. The encoded protein is a smooth muscle actin that is involved in vascular contractility and blood pressure homeostasis. Mutations in this gene cause a variety of vascular diseases, such as thoracic aortic disease, coronary artery disease, stroke, and Moyamoya disease, as well as multisystemic smooth muscle dysfunction syndrome. [provided by RefSeq, Sep 2017]

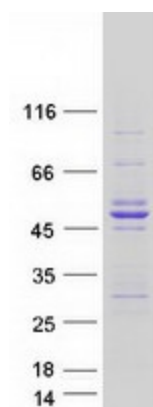
Product images:



Circular map for RC227802



Western blot validation of overexpression lysate (Cat# [LY427983]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC227802 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ACTA2 protein (Cat# [TP327802]). The protein was produced from HEK293T cells transfected with ACTA2 cDNA clone (Cat# RC227802) using MegaTran 2.0 (Cat# [TT210002]).